

**Delaware Department of Health and Social Services
Division of Public Health Laboratory and Epidemiology**

**Laboratory Specimen Collection Procedures
September 2007**

Section I. Culture and/or Identification of Organisms

| TEST | ORGANISM | TYPE OF SPECIMEN | METHOD | TRANSPORT MEDIUM AND TYPE OF CONTAINER | INSTRUCTIONS FOR TRANSPORT | PROCESSING TIME | OTHER |
|---|--|---|---|--|---|------------------|---|
| Acid Fast Bacilli (AFB) smear and culture | Mycobacteria | Respiratory, wounds and stool | Smear: Fluorescent Stain Culture: Conventional and liquid culture medias | 50 ml plastic tubes supplied by DPHLab | Refrigerate (2-8° C) | 4-6 weeks | |
| Bio-Terrorism agents | | | | | | | Call DPH Lab Director at 223-1520. |
| Chlamydia Culture | Chlamydia trachomatis | Swab of endocervix, urethra, conjunctiva or nasopharynx | Culture for organism | Viral Transport Media (VTM) | Refrigerate (2-8° C) immediately: deliver on wet ice | 10 working days | Sent to VA |
| Nucleic Amplification for Neisseria gonorrhea and Chlamydia trachomatis | Neisseria gonorrhoeae and Chlamydia trachomatis | Swab from endocervix or urethra First void Urine | Nucleic Acid Amplification | Gen-Probe collection kit for swab or urine | Refrigerate (2-8° C) or Room temp Specimen stable for 30 days in collection kit Transfer urine within 24 hrs to collection kit. | 2-3 working days | |
| Eastern Equine Encephalitis (EEE) | Arbovirus | CSF | ELISA (IgG, IgM) Real time PCR | Sterile container | Refrigerate (2-8° C) immediately: deliver on wet ice | 4-5 working days | |
| Food | E. coli 0157:H7 Listeria Salmonella Shigella Staph aureus BT agents | Food | Culture for organism | 25-100 grams in sterile container or in original container | Refrigerate (2-8° C) | 5-6 working days | Contact Epidemiology at 744-4541 for prior approval. Must specify target organism on lab slip. |
| Gonorrhea Culture | Neisseria gonorrhoeae | Swab of endocervix, urethra, oropharynx or rectum | Culture for organism | Modified Thayer Martin (MTM) | Place in CO2 container, store in an incubator at 35°C and transport within 4 days. | 2-3 working days | Specimens must be received within 4 days of collection or they will be rejected. |

Section I. Culture and/or Identification of Organisms - Continued

| TEST | ORGANISM | TYPE OF SPECIMEN | METHOD | TRANSPORT MEDIUM AND TYPE OF CONTAINER | INSTRUCTIONS FOR TRANSPORT | PROCESSING TIME | OTHER |
|---|---|---|---|--|--|--|--|
| Herpes | Herpesviridae | Swab of vesicle, genital lesion, conjunctiva, throat | Culture for virus | Viral Transport Media (VTM) | Refrigerate (2-8° C) immediately: deliver on wet ice | 3-7 working days | |
| CMV | | Urine | | Viral Transport Media (VTM) | Refrigerate (2-8° C) immediately: deliver on wet ice within 12 hours of collection | 2 weeks to 1 month or more | 1/3 VTM and 2/3 urine |
| Human Immunodeficiency Virus (HIV), oral | Retrovirus | Oral swab from buccal mucosa | Western Blot (confirmatory) | Orasure HIV-1 specimen collection kit | Refrigerate (2-8° C) | 5 working days | |
| Miscellaneous culture | Pathogenic organisms | Swab of site to be cultured (i.e. eye, throat, wound, endocervix, sputum) | Culture for organism | Culturette with transport media in tube | Refrigerate (2-8° C) | 2-3 working days | Blood cultures and anaerobic cultures are not accepted |
| OCME (Office of Chief Medical Examiner) | Pathogenic organisms | Swab of site to be cultured, tissues, body fluids | Culture for organism | Culturette with transport media in tube or sterile container | Refrigerate (2-8° C) | 2-3 working days | Autopsy specimens |
| Norovirus | Norwalk like viruses (NLV) | Stool | PCR | Sterile container | Refrigerate (2-8° C) immediately: deliver on wet ice | 2-3 working days Possibly longer because specimens will be run in batches | Contact Epidemiology at 744-4541 for prior approval. |
| Ova and Parasites | Pathogenic ova and parasites | Stool | Direct and concentrated smears Trichrome | Formalin (5%) and Polyvinyl Alcohol (PVA) | Room temperature | 2-3 working days | Do not refrigerate specimen. |
| Cryptosporidiosis Cyclospora Isospora | Cryptosporidium parvum Cyclospora cayetanensis Isospora belli | Stool | Modified Acid Fast stain | Formalin (5%) and Polyvinyl Alcohol (PVA) | Room temperature | 2-3 working days | Do not refrigerate specimen. |

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|---|---|--|---------------------------------|---|----------------------------|-------------------|--|
| Malaria smear | Plasmodium and other blood parasites | Blood | Giemsa stain | EDTA tube (purple top) | Refrigerate (2-8° C) | 1-2 working days | Contact Microbiology at 223-1520 for prior approval. |
| Pinworm | Enterobius vermicularis | Transparent tape applied to the perianal skin then applied to a glass slide or a Pinworm prep kit. | Microscopic examination | Scotch tape prep or Pinworm prep kit | Room temperature | 2-3 working days | Use only transparent, not translucent tape |
| Pertussis | Bordetella pertussis | Swab of nasopharynx only | PCR | Nasopharyngeal rayon swab collection kit (no transport media) | Room temperature | 3 working days | Swab kits available from the DPH Lab. Call 223-1520. |
| PFGE (Pulsed-field Gel Electrophoresis) | Salmonella Shigella E. coli 0157:H7 Listeria | Grown culture | Gel Electrophoresis | Nutrient agar slant | Refrigerate (2-8° C) | 3-5 working days | |
| Rabies | Rabies Virus | Mammal brain | Fluorescent antibody (FA) | Double bagged or sealed container | Refrigerate (2-8° C) | 1 working day | Do not freeze! |
| Serotyping | Salmonella, Shigella, Haemophilus influenzae, Neisseria meningitidis, and E. coli 0157:H7 | Grown culture | Slide and tube agglutination | Nutrient agar slant, Brain Heart Infusion slant or Chocolate agar slant | Room temperature | 3 days to 2 weeks | Mueller Hinton agar slants are unacceptable |
| Stool Culture | Campylobacter, E. coli 0157:H7, Salmonella, Shigella, and other enteric pathogens Shigatoxin producing E. coli | Stool or rectal swab | Culture for organism EIA | Cary and Blair transport media: One marble sized piece or one tablespoon is sufficient for all tests. | Refrigerate (2-8° C) | 3-4 working days | Other organisms must be requested on the lab slip. |
| Strep throat culture | Streptococcus pyogenes | Swab of throat | Culture for organism | Culturette with transport media in tube | Refrigerate (2-8° C) | 1-2 working days | |

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|---------------|---|--|------------------------|--|---|--|---|
| Urine culture | UTI causing bacterium | Clean caught urine | Culture for organism | Sterile container | Refrigerate (2-8° C) | 1-2 working days | |
| Viral Culture | VZV (Chicken Pox) | Throat or Urine | Culture for virus | Viral Transport Media (VTM) | Refrigerate (2-8° C) immediately; deliver on wet ice | 4-10 working days | Send to Virology first for splitting |
| | West Nile Virus | CSF | Culture, MIA | Sterile container | | 4-5 working days MIA 10 working days culture | |
| Virus Stool | Adenovirus Coxsackie Echovirus Enterovirus Poliovirus | Stool: One marble sized piece or one tablespoon is sufficient for all tests. | Culture for virus | Viral Transport Media (VTM) | Refrigerate (2-8° C) immediately; deliver on wet ice within a few hours of collection | 4-10 working days | Contact Epidemiology at 744-4541 for prior arrangement. |
| | Norovirus (Norwalk virus) | Stool | PCR | Sterile container | Refrigerate (2-8° C) immediately; deliver on wet ice | 2-3 working days | |
| Viral Throat | Coxsackie Echovirus Enterovirus Poliovirus | Swab of throat or nasopharynx, nasal washing, bronchial washing | Culture for virus | Viral Transport Media (VTM) or dry swab for PCR testing. | Refrigerate (2-8° C) immediately; deliver on wet ice within a few hours of collection | 4-10 working days Confirmatory testing may take 20 working days or longer | |
| | Influenza A and B Parainfluenza 1,2,and 3 Adenovirus Respiratory Syncytial Virus (RSV) | | PCR Shell Vials | | | | |

Section II. Serologic Tests

| TEST | ORGANISM | TYPE OF SPECIMEN | METHOD | TRANSPORT MEDIUM AND TYPE OF CONTAINER | INSTRUCTIONS FOR TRANSPORT | PROCESSING TIME | OTHER |
|--|----------------------------|------------------|---|--|----------------------------|-------------------|--|
| Human Immunodeficiency Virus (HIV) | Retrovirus | Serum | ELISA-HIV 1 Western Blot (confirmatory) | Sterile red top or sterile container | Refrigerate (2-8° C) | 10 working days | |
| Syphilis Serology | | | | | | | |
| RPR (Rapid Plasma Reagin) | Treponema pallidum | Serum | Nontreponemal antigen | Sterile red top or sterile container | Refrigerate (2-8° C) | 3-5 working days | |
| TPPA (Treponemal Pallidum Particle Agglutination) | Treponema pallidum | Serum | Treponemal antigen | Sterile red top or sterile container | Refrigerate (2-8° C) | 3-5 working days | |
| FTA (Fluorescent Treponemal Antibody) | Treponema pallidum | Serum | Fluorescent Antibody Stain | Sterile red top or sterile container | Refrigerate (2-8° C) | 5-10 working days | Not done at DPHL/ Sent to MD for special requests |
| VDRL (Venereal Disease Research Laboratory) | Treponema pallidum | CSF | Nontreponemal antigen | Sterile container or sterile container | Refrigerate (2-8° C) | 5 working days | Test performed on CSF only |
| Viral Hepatitis | Hepatitis A Hepatitis B | Serum | Antigen/Antibody titers: HAV IgM HAV IgG (for epi purposes) Hep B Surface Ab | Sterile red top or sterile container | Refrigerate (2-8° C) | 3-7 working days | Hepatitis C testing is not performed at DPHLab |
| Viral Serological Tests | | | | | | | |
| Arbovirus: (Eastern Equine Encephalitis (EEE) and West Nile Virus (WNV)) | Various viruses | Serum | ELISA (IgG, IgM) HAI WNV-MIA | Sterile red top or sterile container | Refrigerate (2-8° C) | 2-5 working days | |
| Herpes simplex 1 & 2 | | Serum | ELISA (IgG) | Sterile red top or sterile container | Refrigerate (2-8° C) | Batched weekly | |
| Varicella (Chickenpox) | | Serum | IFA (IgG, IgM) | Sterile red top or sterile container | Refrigerate (2-8° C) | 1-2 working days | |